

The State Intellectual Property Office of the People's Republic of China

Applicant	CALSONIC KANSEI CORPORATION, NISSAN MOTOR CO., LTD	Issue Date Sep 21, 2007
Agent	Dragon International Patent Office	
Application No.	2003801074337	
Title of Invention	HYDROGEN COMBUSTION DEVICE HAVING HYDROGEN PIPE	

THE NOTIFICATION OF THE FIRST OFFICE ACTION

1. ☒ In accordance with the Request for substantive examination, the examiner has made the examination on the above patent application based on the provision in paragraph 1, Article 35 of the PRC Patent Law.

☐ The Patent Office itself has decided to make a substantive examination for the above cited patent application based on the provision in paragraph 2, Article 35 of the PRC Patent Law.

2. ☒ The applicant requested to designate the filing date of

December 25, 2002 in the Patent Office of JP as the priority date;

 in the Patent Office of as the priority date;

 in the Patent Office of as the priority date;

 in the Patent Office of as the priority date;

with the submission of certified copy of priority Document(s).

☐ no certified copy of priority document has been received heretofore and, according to the provisions of Article 30 of the PRC Patent Law, it is deemed that no priority right has been requested.

3. ☐ The applicant submitted the amended text is not in conformity with Article 33 of Chinese Patent Law and is unacceptable:

☐ the amended text submitted according to Article 28 or 41 of the PCT.

4. ☒ Examination is made based on the Chinese translation of the original filing document.

☐ Examination is made based on the following documentations.

☐ page(s) of description based on the Chinese translation of the original filing document.

Page(s) of description based on the Chinese translation of attachment of

international Preliminary Examination Report.

Page(s) ____ of description based on the amended documents that are submitted in accordance with Article 28 or 41 of the PCT.

Page(s) ____ of description based on the amended documents that are submitted in accordance with Article 51 of the Chinese Patent Law.

☐ Item(s) ____ of claims based on the Chinese translation of the original filing document.

Item(s) ____ of claims based on the Chinese translation of the amended documents that are submitted in accordance with Article 19 of the PCT.

Item(s) ____ of claims based on the Chinese translation of attachment of international Preliminary Examination Report.

Item(s) ____ of claims based on the amended documents that are submitted in accordance with Article 28 or 41 of the PCT.

Page(s) ____ of claims based on the amended documents that are submitted in accordance with Article 51 of the Chinese Patent Law.

☐ page(s) ____ of drawings based on the Chinese translation of the original filing document.

Page(s) ____ of drawings based on the Chinese translation of attachment of international Preliminary Examination Report.

Page(s) ____ of drawings based on the amended documents that are submitted in accordance with Article 28 or 41 of the PCT.

Page(s) ____ of drawings based on the amended documents that are submitted in accordance with Article 51 of the Chinese Patent Law.

☒ The following reference materials have been cited in this notification (their serial numbers will be referred to in the following procedure);

Serial Number	Number or Title of Reference Material	Publication Date (or Filing Date of A Conflict Patent Application)
1	DE4440494A1	1996.5.15
2.	US5746159A	1998.5.5

5. The conclusion of the examination;

☐ In regard to the description;

☐ The subject matter of the present application is not accepted based on the Article 5 of the PRC Patent Law.

☐ The presentation of the description is not in conformity with the provision of Paragraph 3, Article 26 of PRC Patent Law.

☐ The presentation of the description is not in conformity with the provision of Article 33 of PRC Patent Law.

☐ The presentation of the description is not in conformity with the provision of Rule 18 of the Implementing Regulations of PRC Patent Law.

☒ In regard to the Claims:

☐ Claims ____ can not be allowed owing to lack of novelty based on the provision of paragraph 2, Article 22 of PRC Patent Law.

☐ Claims ____ can not be allowed owing to lack of inventiveness based on the provision of paragraph 3, Article 22 of PRC Patent Law.

☐ Claims ____ can not be allowed owing to lack of practical applicability based on the provision of paragraph 4, Article 22 of PRC Patent Law.

☐ Claims ____ can not be allowed beyond the scope of the protection based on the Article 25 of the PRC Patent Law.

☐ Claims ____ can not be allowed based on the provision of paragraph 4, Article 26 of PRC Patent Law.

☐ Claims ____ can not be allowed based on the provision of paragraph 1, Article 31 of PRC Patent Law.

☐ Claims ____ can not be allowed based on the provision of Article 33 of PRC Patent Law.

☐ Claims ____ do not belong to the definition of invention based on the provision of paragraph 1, Rule 2 of the Implementing Regulations of the PRC Patent Law.

☐ Claims ____ can not be allowed based on the provision of paragraph 1, Rule 13 of the Implementing Regulations of the PRC Patent Law.

☒ Claims 1,6,7 can not be allowed based on the provision of Rules 20 of the Implementing Regulations of PRC Patent Law.

☒ Claims 5-7 can not be allowed based on the provision of Rule 23 of the Implementing Regulations of the PRC Patent Law.

The explanation of the conclusion is given in the attachment sheet in details

6. According to the above conclusion, it is considered that

☐ the applicant should amend the application documents based on the request in the Attachment Sheet.

☒ the applicant should state the reason on which the application can be accepted and amend the part that is indicated not to be conformity with the requirement, otherwise the application will be rejected.

☐ No subject matter in the application is accepted, said application will be rejected if the applicant does not make a statement or fail to make a statement.

☐ the application will be rejected if amendment of documents submitted by applicant goes beyond the scope of patent protection

7. The applicant is drawn attention to that

(1) In accordance with the provisions of Article 37 of the Chinese Patent Law, the applicant shall submit the observation within FOUR months from the date of receiving this notification. If the applicant, without any justified reason, fails to reply within the time limit, the application shall be deemed to have been withdrawn.

(2) The applicant shall make amendments to what is not in conformity with the provisions of Article 33 of PRC Patent Law in the text of this notification. The amended text shall be furnished in duplicate. The formality of the document should be in conformity with the relative provisions of the Guidebook for Examination.

(3) Any response and/or amended specification must be mailed or sent by hand to the receiving Department of the PRC Patent Office. Any documents that are not sent to the Receiving Department do not have legal force.

(4) The applicant and/or his attorney could not go to the PRC Patent Office to meet the examiner if no appointment is made.

8. The text of notification embraces 2 page(s), along with the enclosures herein:

☒ 2 copies of the cited references is enclosed in pages of .

Text of the Notification of the First Office Action

Application Number: 2003801074337

The present application relates to a hydrogen combustion device having hydrogen pipe, after examination, the examiner's opinions are provided as follows:

1. Claim 1 does not possess inventiveness as required by the provision of paragraph 3, Article 22 of the Patent Law;

The annular passage 64 of document 1 is equivalent to the casing defining a passage for airflow;

Document 1 describes a central fuel pipe 44 which extends into the annular passage 64 thereby to supply the gaseous fuel into the airflow, and the central fuel pipe 44 provided with a plurality of openings 58, 60, 62; the central fuel pipe 44 and openings 58, 60, 62 of document 1 are same as the hydrogen ejecting part and hydrogen ejecting orifices of the present application in structure;

The mixing chambers 50, 54, 56 of document 1, for mixing gas, are equivalent to the mixer of the application;

Catalysts 46, 48, 50 of document 1 are arranged on the downstream side of the mixing chamber to cause an oxidative reaction of the mixed gas; equivalent to a combustion catalyst arranged on the downstream side of the mixer;

The fuel pipe 44 of document 1 is called as a central fuel pipe

positioned at a center of the passage 64, which is equivalent to the hydrogen ejecting part positioned at a center in the cross section of the passage;

The opening direction of the central fuel pipe of document 1 are also perpendicular to the flowing direction of the airflow, which is equivalent to that the hydrogen ejecting orifices are arranged so that their axes extend in the radial direction of the hydrogen ejecting part, substantially perpendicularly to the flowing direction of the airflow in the application; The technical solution of claim 1 of the application differs from document 1 merely in that the present application seeks for protection for a hydrogen combustion device and the fuel pipe which is the hydrogen pipe, but document discloses a fuel pipe using gaseous fuel;

It is obvious to a person skilled in the art to apply hydrogen for such combustion device, hydrogen is one of the gaseous fuel.

As described above, claim 1 does not possess inventiveness since it does not have prominent substantive features as compared with document 1.

Document 2 also have prejudice to inventiveness of claim 1, the applicant shall pay attention when making amendment.

2. Claim 3 further define claim 1, the diameter of the hydrogen ejecting part is determined by combustion load, pressure and flow; it has no practical significance whether the ejecting part is perpendicular to the

hydrogen pipe because of the mixer arranged on the downstream side; weld is a conventional technical means; Therefore, the technical feature in the characterizing portion of claim 3 does not have contribution over the prior art, claim 3 does not possess inventiveness since it does not have prominent substantive feature as compared with document 1.

3. “a curved portion” appears in claim 7, the diameter of the hydrogen ejecting orifice 42a on an outer circumferential side of the curved portion is smaller than that of the hydrogen ejecting orifice 42b on an inner circumferential side of the curved portion of the hydrogen pipe body, however, in accordance with the technical solution of claim 1 which referred to indirectly, “the hydrogen ejecting orifices are arranged so that their axes extend in the radial direction of the hydrogen ejecting part, substantially perpendicularly to the flowing direction of the airflow”, the hydrogen ejecting orifice of the curved portion is obviously not perpendicular to the flowing direction of the airflow, thus the scope of protection of claim 7 is not clear, which is not in conformity with the provision of paragraph 1, Rule 20 of the Implementing Regulations of the Patent Law.

4. “substantially” appears in the claims, the descriptions of the diameter in claims 6, 7 are improper, so that the claims 6, 7 are not clear, which are not in conformity with the provision of paragraph 1, Rule 20 of the Implementing Regulations of the Patent Law, the applicant shall make

amendment to it.

Claims 5, 6, 7 refers to claims 1, 5, 5, respectively, but the subject matter sought for protection are “the front body structure”, which is not in conformity with the provision of paragraph 1, Rule 23 of the Implementing Regulations of the Patent Law.

“straight part” of claim 6 does not appear in the claim which it refers to, and its position is not described in said claim, which make said claim unclear and not in conformity with the provision of paragraph 1, Rule 20 of the Implementing Regulations of the Patent Law.

“氢气排出部分 41”, “气体喷出部分 41” appearing in the specification make the specification unclear, which is not in conformity with the provisions of Rule 18 of the Implementing Regulations of the Patent Law.

Based on the above reasons, the present application cannot be allowed according to the present text. The applicant shall make amendment to the application documents according to the examination opinions provided in the notification. The application shall be rejected if the applicant cannot overcome the above defects. The amendment shall comply with the provisions of Article 33 of the Patent Law and may not go beyond the scope of the disclosures recorded in the initial specification and claims. The applicant shall submit replacement sheets of the amendments in duplicate, original documents with marks for any addition, deletion or

replacement.

Examiner: Xudong Zhang

Code: B305



中华人民共和国国家知识产权局

三号 PCT/05/0723

100029 北京市朝阳区裕民路 12 号中国国际科技会展中心 A1210 号 北京银龙知识产权代理有限公司 张敬强	发文日期 2007.09.21
申请号: 2003801074337	
申请人: 康奈可关精株式会社, 日产自动车株式会社	
发明名称: 带有氢气管的氢气燃烧设备	

第一次审查意见通知书

(进入国家阶段的 PCT 申请)

- ☒ 应申请人提出的实审请求, 根据专利法第 35 条第 1 款的规定, 国家知识产权局对上述发明专利申请进行实质审查。
☐ 根据专利法第 35 条第 2 款的规定, 国家知识产权局专利局决定自行对上述发明专利申请进行审查。
- ☒ 申请人要求以在:
JP 专利局的申请日 2002 年 12 月 25 日为优先权日,
专利局的申请日 年 月 日为优先权日,
专利局的申请日 年 月 日为优先权日。
- ☐ 申请人于 年 月 日和 年 月 日以及 年 月 日提交了修改文件。
经审查, 申请人于 年 月 日提交的 不符合专利法实施细则第 51 条第 1 款的规定。
☐
- ☒ 审查是针对原始提交的国际申请的中文译文进行的。
☐ 审查是针对下述申请文件进行的:
☐ 说明书 第 页, 按照进入中国国家阶段时提交的国际申请文件的中文文本;
第 页, 按照专利性国际初步报告附件的中文文本;
第 页, 按照依据专利合作条约第 28 条或 41 条规定所提交的修改文件;
第 页, 按照依据专利法实施细则第 51 条第 1 款规定所提交的修改文件;
第 页, 按照 年 月 日所提交的修改文件。
☐
☐ 权利要求 第 项, 按照进入中国国家阶段时提交的国际申请文件的中文文本;
第 项, 按照依据专利合作条约第 19 条规定所提交的修改文件的中文文本;
第 项, 按照专利性国际初步报告附件的中文文本;
第 项, 按照依据专利合作条约第 28 条或 41 条规定所提交的修改文件;
第 项, 按照依据专利法实施细则第 51 条第 1 款规定所提交的修改文件;
第 项, 按照 年 月 日所提交的修改文件。
☐
☐ 附图 第 页, 按照进入中国国家阶段时提交的国际申请文件的中文文本;
第 页, 按照专利性国际初步报告附件的中文文本;
第 页, 按照依据专利合作条约第 28 条或 41 条规定所提交的修改文件;
第 页, 按照依据专利法实施细则第 51 条第 1 款规定所提交的修改文件;
第 页, 按照 年 月 日所提交的修改文件。



第一次审查意见通知书正文

申请号：2003801074337

本申请涉及预混气体燃料燃烧器，现在提出以下审查意见。

1、权利要求1不具有专利法第22条第三款规定的创造性：

对比文件1中环状空气通道64相当于本申请权利要求1中的形成有空气流通道的套管；

对比文件1中具有中心气体燃料管44伸入空气通道64将气体燃料供入到空气流中，中心燃料管在其管体上设有多个开口58、60、62；结构上对比文件1中的中心燃料管44、开口58、60、62与本申请的氢气排出部分、氢气排出口相同

对比文件1中具有混合腔52、54、56，用于混合气体，相当于本申请的混合器；

对比文件1中具有燃烧催化剂46、48、50位于混合腔下游，引起混合气体氧化反应；相当于本申请的混合器下游侧的燃烧催化剂；

对比文件1中的燃料管44被称作中心燃料管位于空气通道64的中心，相当于本申请的氢气排出部分位于套管的横截面中心；

对比文件1中心燃料管的开口的方向在燃料管径向设置也垂直于空气流方向，与本申请的氢气排出孔位于氢气排出部分径向并垂直于空气流的设置相同；

本申请权利要求1的技术方案与对比文件1的区别仅在于本申请要求保护的是氢气燃烧设备、燃料管是氢气管，而对比文件1中公开的是燃料管，使用气体燃料；

对于本领域技术人员来说，氢气属于气体燃料的一种，本领域技术人员将氢气用于这样的气体燃烧器是显而易见的，

综上所述，权利要求1相对于对比文件1不具有专利法第22条规定的突出的实质性特点，不具有创造性。

对比文件2也影响权利要求1的创造性，申请人修改时应予以注意。

2、权利要求3对权利要求1进一步限定，对于本领域技术人员来说，氢气排出部分的直径要根据燃烧负荷、压力、流量等条件确定；排出部分是否与氢气管道垂直也因为在下游有混合器而不具有现实意义；至于焊接是本领域惯用的技术手段；所以权利要求3限定部分的技术特征不能对现有技术作出贡献，权利要求3相对于对比文件1仍不具有突出的实质性特点，不具有创造性。

同样权利要求5限定部分的特征对于本领域技术人员来说能够根据现实条件进行设置，权利要求5相对于对比文件1不具有创造性。

3、权利要求7中出现了“弯曲部分”，弯曲部分的外圆周一侧上的氢气排出孔42a的直径小于弯曲部分的内圆周一侧上的氢气排出孔42b的直径，但是根据其间接引用的权利要求1的技术方案，“氢气排出孔设置为使它们的轴在氢气排出部分的径向延伸，垂直于空气流的流动方向”，弯曲部分的氢气排出孔显然不能垂直于空气流动的方向，所以权利要求7要求保护的范围不清楚，不符合专利法实施细则第20条第一款的规定。

4、权利要求中有‘基本’，权利要求6、7中对直径的叙述不当，使权利要求的意思不清楚，不符合专利法实施细则第20条第一款的规定，申请人应予以修改。。

权利要求5、6、7分别引用权利要求1、5、5，但是其要求保护的主题为“前面主体的结构”，不符合专利法实施细则第23条第一款的规定。

权利要求6中的“直线部分”在其引用的权利要求中没有出现，而且在该权利要求中也没有说明其位置，造成权利要求的意思不清楚不符合专利法实施细则第20条第一款的规定。

说明书中有“氢气排出部分41”、“气体喷出部分41”，造成说明书意思不清楚，不符合专利法实施细则第18条的规定。

基于上述理由，本申请按照目前的文本还不能被授予专利权。申请人应按照本通知书提出的审查意见对申请文件进行修改，申请人若不能克服上述的缺陷本申请将被驳回，对申请文件的修改应当符合专利法第三十三条的规定，不得超出原说明书和权利要求书记载的范围。申请人若修改应提交修改替换页两份、原稿一份在上面用红笔标明修改之处，申请人眷答复则本申请可望被授予专利权。

审查员：张旭东

代码：B305